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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/811,261 | 03/26/2004 | Yuhua Huang | UCF-387 | 1653 |
| 23717 | 7590 | 06/14/2005 | EXAMINER | |
| LAW OFFICES OF BRIAN S STEINBERGER 101 BREVARD AVENUE COCOA, FL 32922 | | | VU, PHU | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |
| DATE MAILED: 06/14/2005 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/811,261 | Applicant(s) HUANG, YUHUA | |
| | Examiner Phu Vu | Art Unit 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 4-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Tillin et. al US Patent No. 6204904.

Regarding claim 1, Tillin teaches a method of manufacturing an achromatic quarter wave film comprising laminating a TN-LC polymeric film (fig. 2 element 4) between two uniaxial polymeric films as a sandwich provide an optical component, providing a polarizer means (fig. 2 element 1) to receive incident unpolarized light of a wide spectral bandwidth and convert said incident unpolarized light into linearly polarized light and organizing said TN-LC polymeric film and said uniaxial polymeric film components of said optical component so that the linearly polarized light becomes circularly polarized after passing through the two uniaxial polymeric films and the TN-LC film (see CL in fig. 2 which stands for left hand circular polarization), and reflecting (fig. 2 element 2 is a mirror) the circularly polarized light so that it passes back through the TN-LC film and two uniaxial polymeric films one more time and finally becomes linearly polarized and orthogonal to the polarizer, and blocking out the linearly polarized light by the polarizer(fig. 1 element 9) leading to a dark state whereby the lamination of the two

films and the TN-LC film function as a quarter wave film (input = 0 degrees output is 90 degrees thus a quarter wave film).

Regarding claim 5, the reference teaches an achromatic quarter-wave film comprising a laminated TN-LC polymeric film (fig. 2 element 4) sandwiched between two uniaxial polymeric films (fig. 2 elements 3 and 5) to provide an optical component, a polarizer (fig. 2 element 1) to receive incident unpolarized light of a wide spectral bandwidth and convert said incident polarized light into linearly polarized light; and a reflector (fig. 2 element 2) of the circularly polarized light emergent from the optical component.

Regarding claims 2 and 6, the limitation of the films having similar structures is met because the limitation does not set for any criteria for similar. All 3 layers can be considered solid thus are molecularly similar states.

Regarding claims 4 and 8, the limitation small variation of their parameters around their optimal values does not set forth any criteria for which parameters and to what extent small is considered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tillin in view of Hasebe et al US Patent No. 5863457.

Regarding claims 3 and 7, Tillin discloses all the limitations of claims 3 and 7 except the retarders having a phenyl group. Hasebe discloses a phenyl group to form a composition that exhibits enantiotropically nematic phase at room temperature. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to use a retarder with a phenyl group to exhibit enantiotropically nematic phase at room temperature.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562. The examiner can normally be reached on 8AM-5PM M-F.

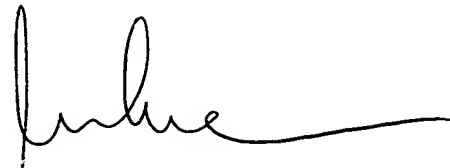
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit: 2871

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Phu Vu
Examiner
AU2871

A handwritten signature in black ink, appearing to read 'Dung T. Nguyen', with a long horizontal flourish extending to the right.

DUNG T. NGUYEN
PRIMARY EXAMINER